



A.D. 1853 N° 23.

S P E C I F I C A T I O N

OF

GUSTAVE PAUL DE L'HUYNES.

MEDICAL PORTATIVE ELECTRO-GALVANIC
APPARATUS.

L O N D O N :

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1854.



A.D. 1853 N° 23.

Medical Portative Electro-Galvanic Apparatus.

LETTERS PATENT to Gustave Paul de L'Huynes, of 21, Frith Street, Soho Square, Medical Doctor, for the Invention of
“**CERTAIN IMPROVEMENTS IN MEDICAL PORTATIVE ELECTRO-GALVANIC APPARATUS.**”

Sealed the 28th June 1853, and dated the 5th January 1853.

PROVISIONAL SPECIFICATION left by the said Gustave Paul de L'Huynes at the Office of the Commissioners of Patents, with his Petition, on the 5th January 1853.

I, GUSTAVE PAUL DE L'HUYNES, of 21, Frith Street, Soho Square,
5 Medical Doctor, do hereby declare the nature of the Invention for
“**CERTAIN IMPROVEMENTS IN MEDICAL PORTATIVE ELECTRO-GALVANIC APPARATUS**” to be as follows :—

The Invention consists in forming with a plate of red copper, or of
any other negative metal, (isolated from a plate of zinc, but in communi-
10 cation with it by means of a piece of cloth saturated with the electro-
motive water,) an electro-galvanic battery, and in uniting this battery
to another of the same kind by putting in communication the copper

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(or any other negative metal) pole of an element with the zinc pole of another element, and so on for increasing the number of batteries. The strength of the apparatus is doubled by setting a copper or any other negative metal plate between two zinc plates, taking care, for the developing of the electro-galvanic current, that the negative metal plate 5 should not have any direct contact with the zinc plates, and to have these last plates united together.

The electro-galvanic bath is composed of a solution of chloride of sodium, hydrochlorate of ammonia, and sulphate of copper.

SPECIFICATION in pursuance of the conditions of the Letters Patent, 10
filed by the said Gustave Paul de L'Huynes in the Great Seal
Patent Office, on the 5th July 1853.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I,
GUSTAVE PAUL DE L'HUYNES, of 21, Frith Street, Soho Square, Medical
Doctor, send greeting. 15

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Fifth day of January, in the year of our Lord One thousand eight hundred and fifty-three, in the sixteenth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Gustave Paul de L'Huynes, Her 20 special licence that I, the said Gustave Paul de L'Huynes, my executors, administrators, and assigns, or such others as I, the said Gustave Paul de L'Huynes, my executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and 25 lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, my Invention for "**CERTAIN IMPROVEMENTS IN MEDICAL PORTATIVE ELECTRO-GALVANIC APPARATUS**," upon the condition (amongst others) that I, the said Gustave Paul de L'Huynes, by an instrument 30 in writing under my hand and seal, should particularly describe and ascertain the nature of the said Invention, and in what manner the

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same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said Gustave Paul de L'Huynes, do
5 hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement thereof, reference being had to the Drawings hereunto annexed, and to the figures and letters marked thereon, that is to say :

10 My improvements consist in forming with a plate of red copper, or of any other negative metal, (isolated from a plate of zinc, but in communication with it by means of a piece of cloth saturated with the electro-motive water,) an electro-galvanic battery, and in uniting this battery to another of the same kind by putting in communication the
15 copper (or any other negative metal) pole of any element with the zinc pole of another element, and so on for increasing the number of batteries. The strength of the apparatus is doubled by setting a copper or any other negative metal plate between two zinc plates, taking care, for the developing of the electro-galvanic current, that the negative metal
20 plate should not have any direct contact with the zinc plates, and to have these last plates united together.

The electro-galvanic bath is composed of a solution of chloride of sodium, hydrochlorate of ammonia, and sulphate of copper.

DESCRIPTION OF THE DRAWINGS.

25 Figure 1, represents a side view of one element, in which Figure A, represents a zinc plate, B, a copper plate, but which may be of any other negative metal to the zinc plate. D, D, are small wood cross pieces, by which the elements are held separated one from the other, and thereby permitting in the vacant space between the two plates the
30 introducing of small pieces of cloth or flannel. E, E, holders serving to unite together the elements, and maintaining the three plates by means of the small setting screw G. F, F, are apertures to allow of the easy

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saturation of the pieces of cloth when the apparatus is immersed in the electro-motive water ; these holes, which are represented as round in the Drawing, can have any other suitable shape.

Figure II, represents a front view of the apparatus set with two elements. A, A, are the two elements, each of which is composed of two 5 zinc plates, with a copper plate in the centre ; these three plates are separated at their extremities by small wooden cross pieces, by means of which each plate is isolated from the other, and the small pieces of cloth or flannel saturated with the electro-galvanic motive water are introduced, and serve for the development of the electro-galvanic fluid. B, B, B, B, in 10 the same Figure is the brass holder uniting together the two zinc plates. C, C, are pieces of copper or any other metal conductors of the electro-galvanic fluid. D, D, D, D, are the extremities of the copper plates placed between the zinc plates, and which are prepared so as to receive a ring. E, E, E, E, represent the extremities of one of the zinc plates 15 of each element A, A ; they have a form similar to the extremities of the copper plates D, D, in order also to receive a ring, as the two zinc plates are jointed by the holders B, B ; these extremities, E, E, give to the electric current the power emanating from the two zinc plates. F, F, are apertures similar to these herein-before described in Figure 1, 20 and represented by G, G. G, G, upper wire conductors, covered with silk, and having a helical form to enable them to be elongated at will. H, H, small brass plates which fasten the apparatus by means of the springs I, I, on the part which is to receive the electro-galvanic current. K, K, are the rings serving to unite between them the 25 elements composing the apparatus according to the principle of my Invention, namely, that a zinc pole, that is to say, a positive pole, is to be united to a copper or any other negative pole, and so on, if it is desirable to compose the apparatus of more than two elements.

Figure III, represents a front view of an electro-galvanic truss ; in 30 this Figure A, is the electro-galvanic element fixed above the spring of the truss ; this apparatus, which must be composed of eight or nine elements, more or less, is similar to the one herein-before described, with, however, the following modifications : B, B, small plates, similar to

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the small brass plates H, H, of Figure 2, and which are inserted into the pressure cushions of the truss; C, C, pressure cushions; D, spring of the truss; E, part of the ligament of the truss passing under the tie; F, F, conductor threads communicating with the electro-galvanic apparatus A; one of these threads is in communication with the zinc pole, and the other with the other negative metal pole.

Figure IV, represents a front view of an apparatus composed of six electro-galvanic elements. In this Figure A, A, A, are the zinc plates, B, B, B, the plates of copper, or any other negative metal; C, C, are small metallic pieces serving to hold the string by which the apparatus is fastened. D, D, D, D, are the rings serving as conductors from the plates of zinc to a plate of copper. E, E, are the small metallic plates for fastening the apparatus on the intended parts. F, F, are the spiral wire conductors covered with silk. G, G, silk strings serving to tie together the several elements, and to maintain near one another the plates of the said elements. H, H, strings serving to fasten the apparatus. I, string serving to fasten the small metallic plates (E, E,) to their proper places.

The above-described apparatus is provided with only two plates for each element, and between each of them a piece of cloth or flannel saturated with the electro-motive water for developing the electro-galvanic fluid is placed.

In the element represented by Figure V, the copper plate is cut, as shewn in Figure 7, at B, which is filled up by a small wooden or leather piece in such a manner that small rivetings being prepared in C, C, C, C, the three plates are held united, and the two zinc plates communicate by means of the four brass wires rivetted at C, C, C, C, without being in contact or communicating with the negative copper or metallic plate, because the said plate is cut as shewn in B, Figure VII, so that the brass wires pass through the wooden or leather piece.

In Figure VI, A, represents a tube, B, the electro-galvanic spiral conductor wire covered with silk. That apparatus replaces one of the small plates H, of Figure 2, when the electro-galvanic current is to be established into the rectum.

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In Figure VIII, A, is a probe, B, is the electro-galvanic spiral conductor wire covered with silk. This apparatus replaces one of the small plates H, of Figure 2, when the current is to reach the bladder.

The apparatus constructed in conformity with the Invention takes several denominations, according to the different parts of the human 5 body it may be applied to; thus, if placed round the body it is a belt; if round the arm a bracelet, &c. &c.

The principle on which the Invention is founded consists in a red copper or other metal plate being isolated from a zinc plate by means of a piece of cloth or flannel saturated with electro-motive water, forming 10 an electro-galvanic battery; each of these electro-galvanic batteries is united to another by putting in communication the copper pole of one element with the zinc pole of another element, and so on. The same apparatus acquires a double power by placing a copper plate between two zinc plates; taking care, however, for the development of the galvanic 15 current, that the copper plate should not be in direct contact with the zinc plate, and these last be united together. When the apparatus is to be put in operation it is immersed into the electro-motive water, composed of a solution of chlorine of sodium, of hydrochlorate of ammonia, or of sulphate of copper, or of any other acidulated solution. 20

The external parts of the plates are varnished, oxidizing when they are immersed into the electro-galvanic bath.

The wire conductors are galvanized with gold to prevent them oxidizing. It will be easily understood that the elements composing the apparatus can have any convenient forms, either square, oval, or 25 even round, the effect of the Invention being always the same.

And having now described my Invention, and the best manner in which the same is to be performed, I wish it to be understood, as stated before, that I do not confine myself to the precise details of construction of the several parts or organs herein-before described; but what I claim 30 as new, and as the Invention intended to be protected by the said in part recited Letters Patent, is,—

The construction of a portative medical galvanic apparatus by combining relatively one with the other a negative with a positive metal, as

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herein-before described, reference being had to all the Figures of the Drawing.

5 In witness whereof, I, the said Gustave Paul de L'Huynes, have hereunto set my hand and seal, this Fourth day of July, in the year of our Lord One thousand eight hundred and fifty-three.

G. P. DE L'HUYNES. (L.S.)

Witness,

L' DE FONTAINE MOREAU.

LONDON :

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Printers to the Queen's most Excellent Majesty. 1854.

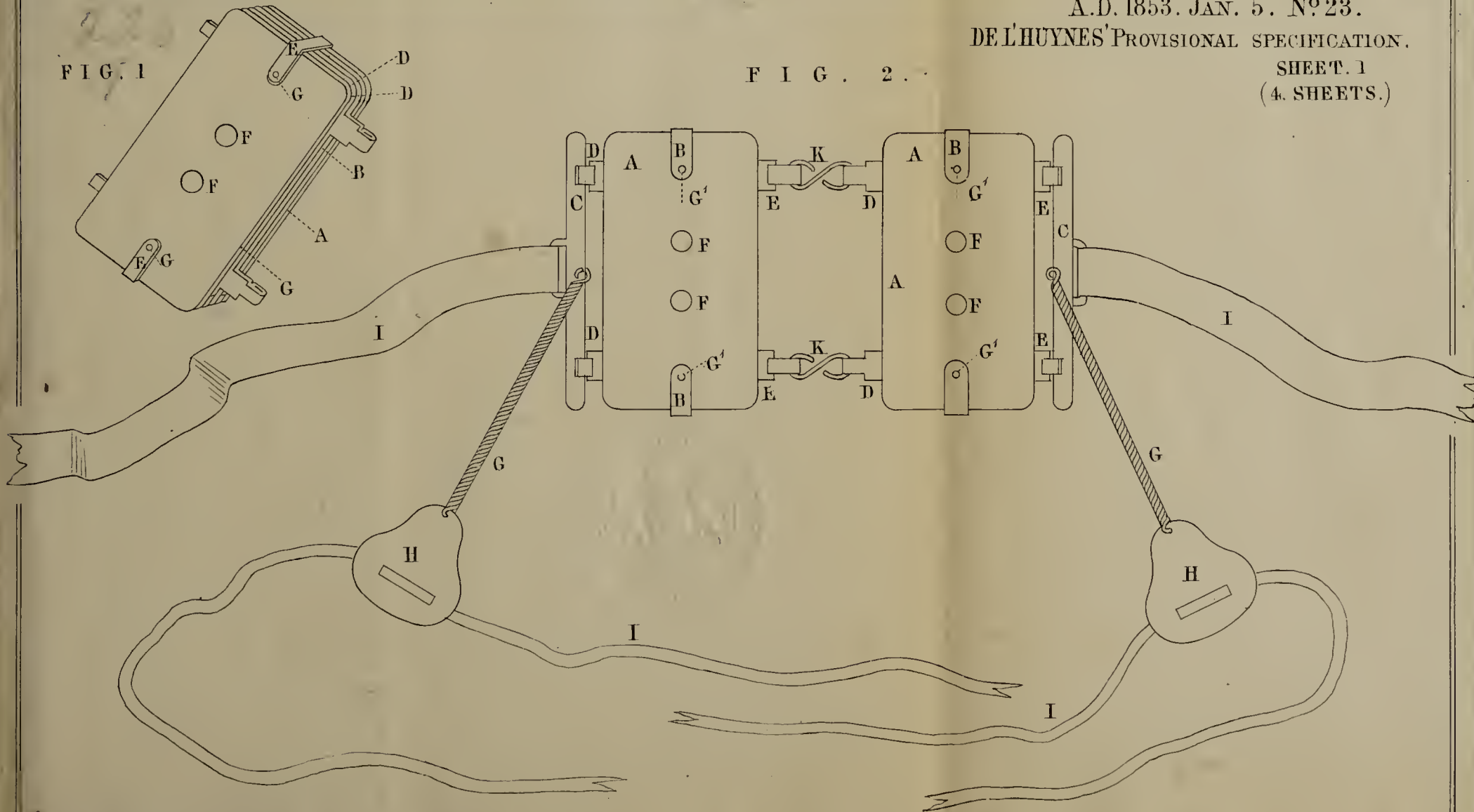
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DE L'HUYNES' PROVISIONAL SPECIFICATION.

SHEET. 1
(4. SHEETS.)

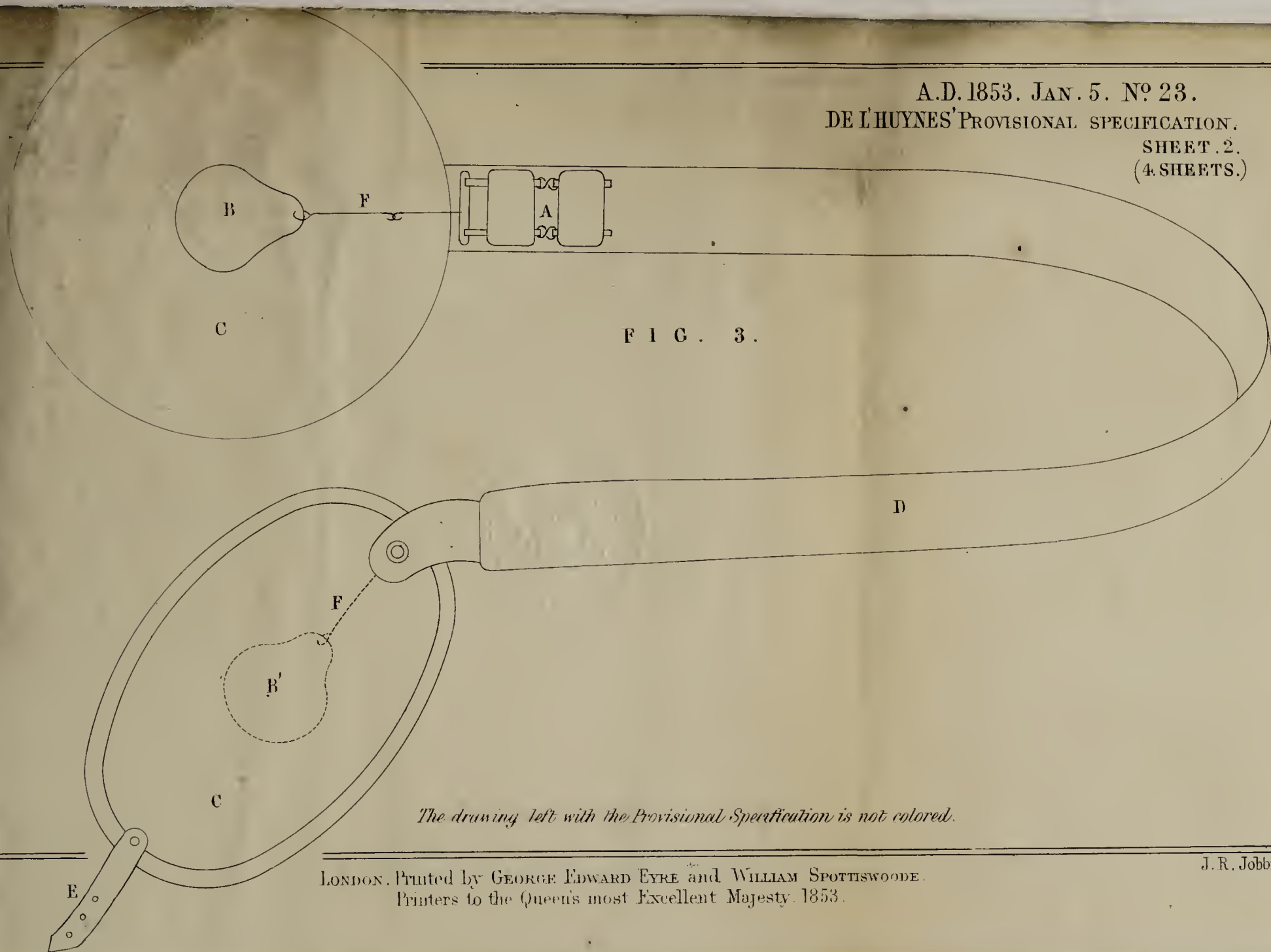
FIG. 1

FIG. 2



The drawing left with the Provisional Specification is not colored.

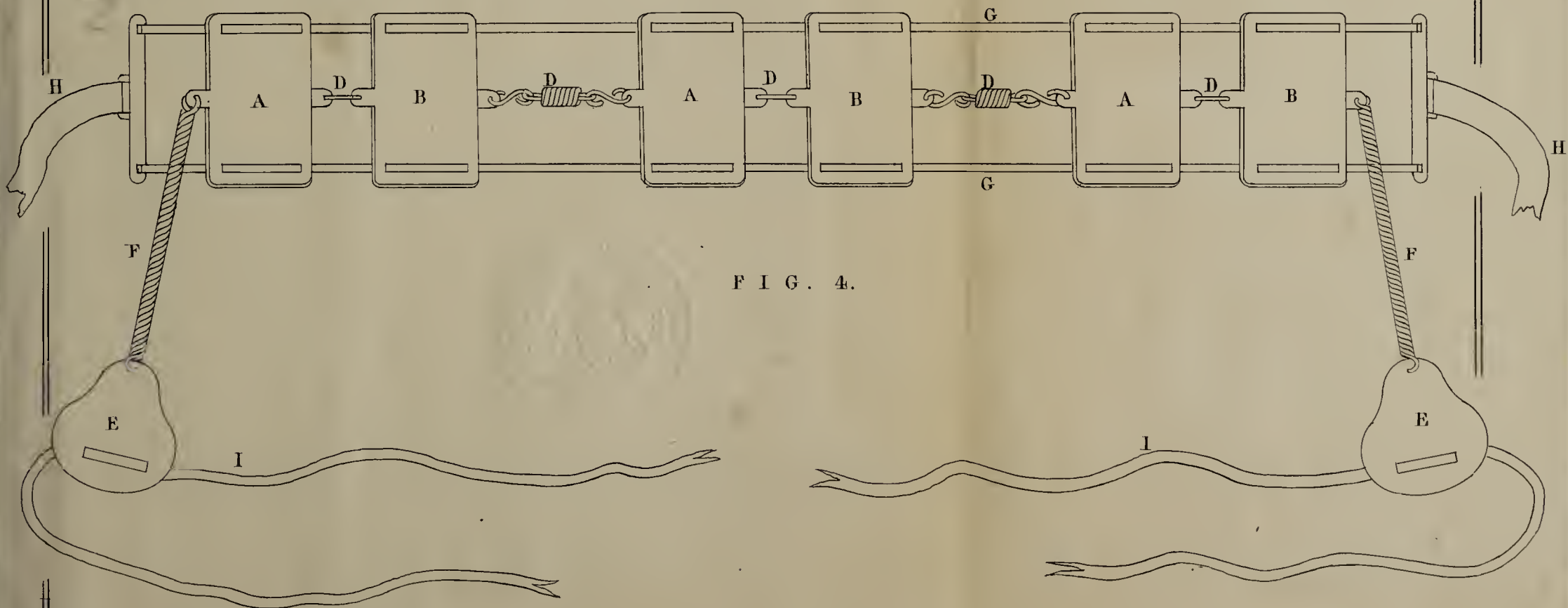
FIG. 3.



The drawing left with the Provisional Specification is not colored.



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DE L' HUYNES' PROVISIONAL SPECIFICATION.



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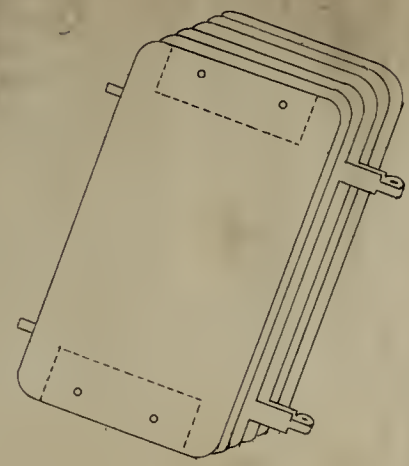


FIG. 5.

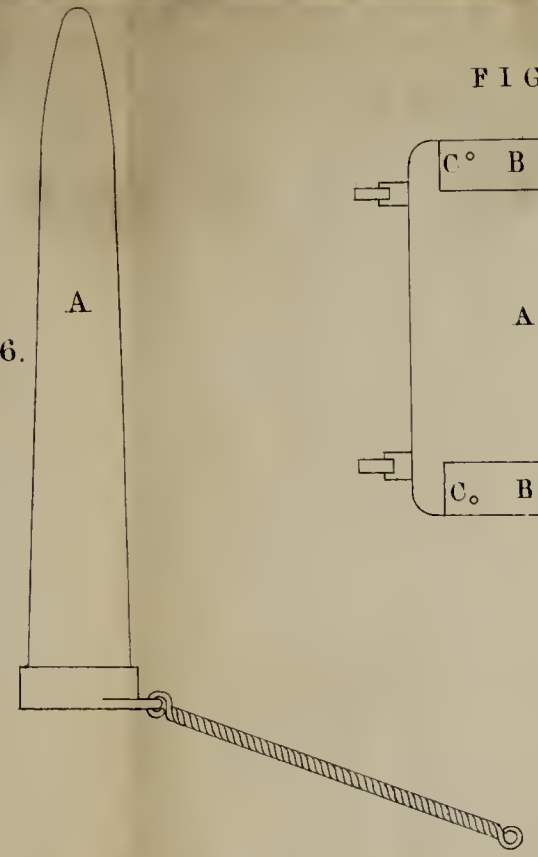


FIG. 6.

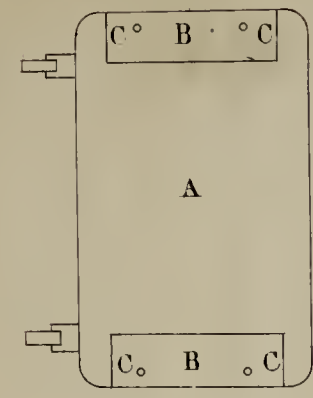


FIG. 7.

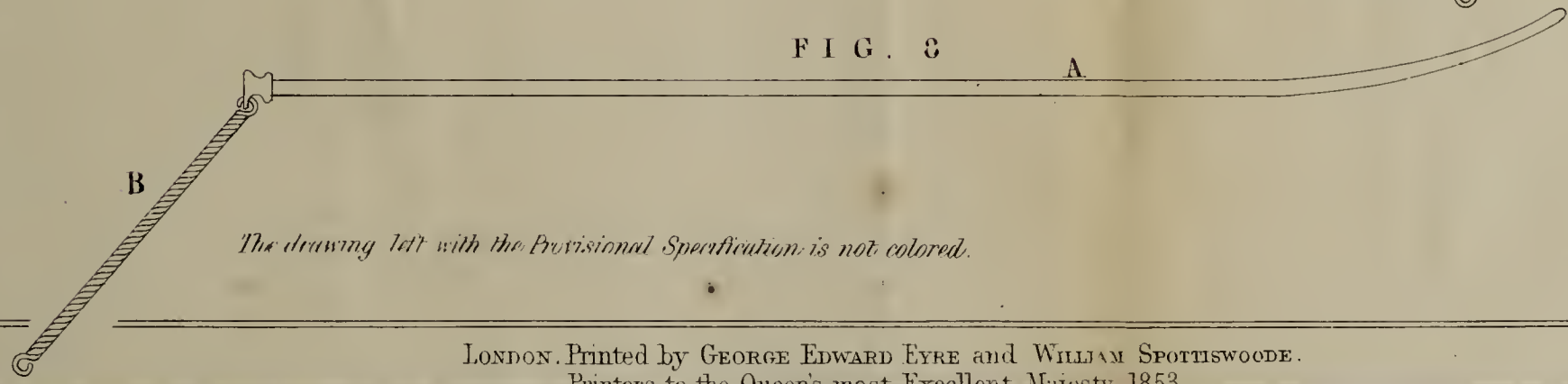


FIG. 8

The drawing left with the Provisional Specification is not colored.

FIG. 1.

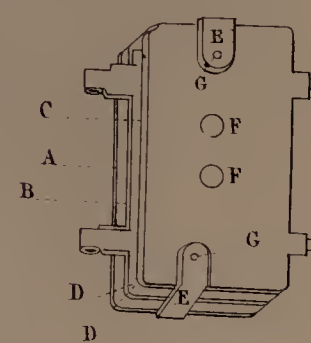


FIG. 2.

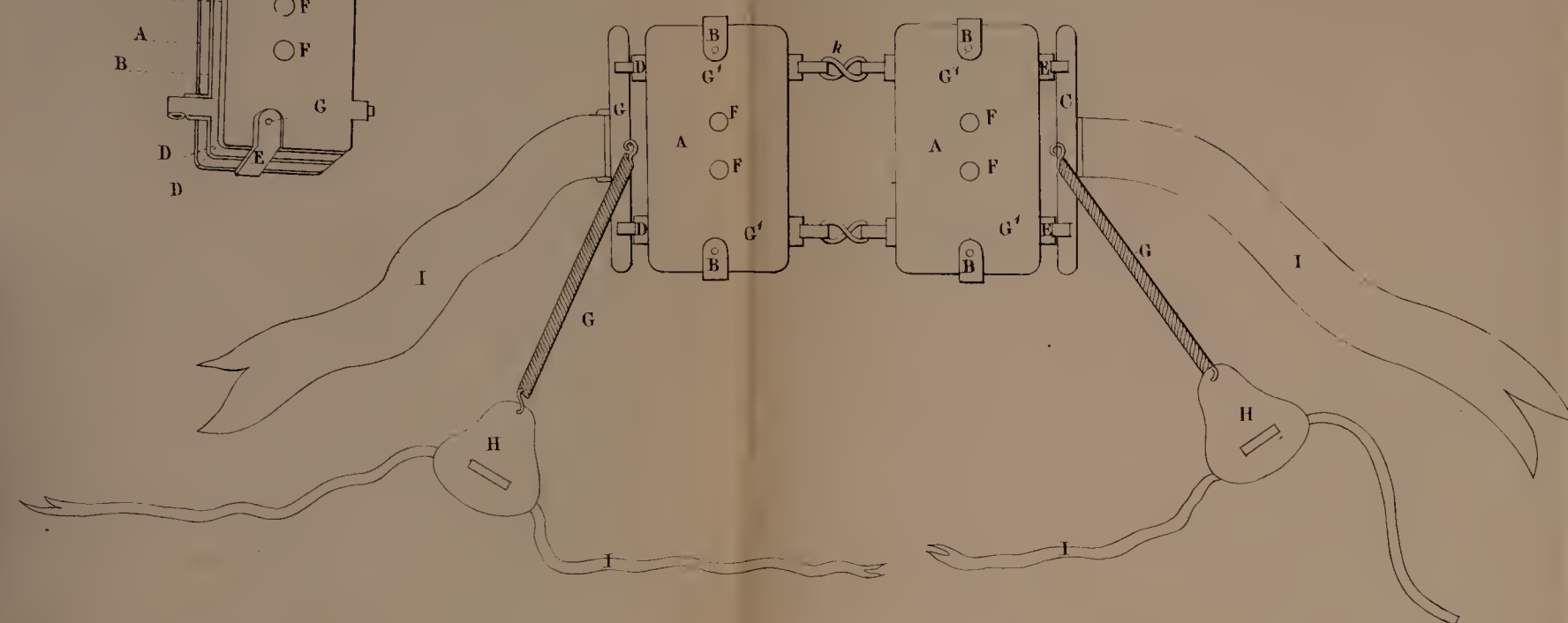


FIG. 3.

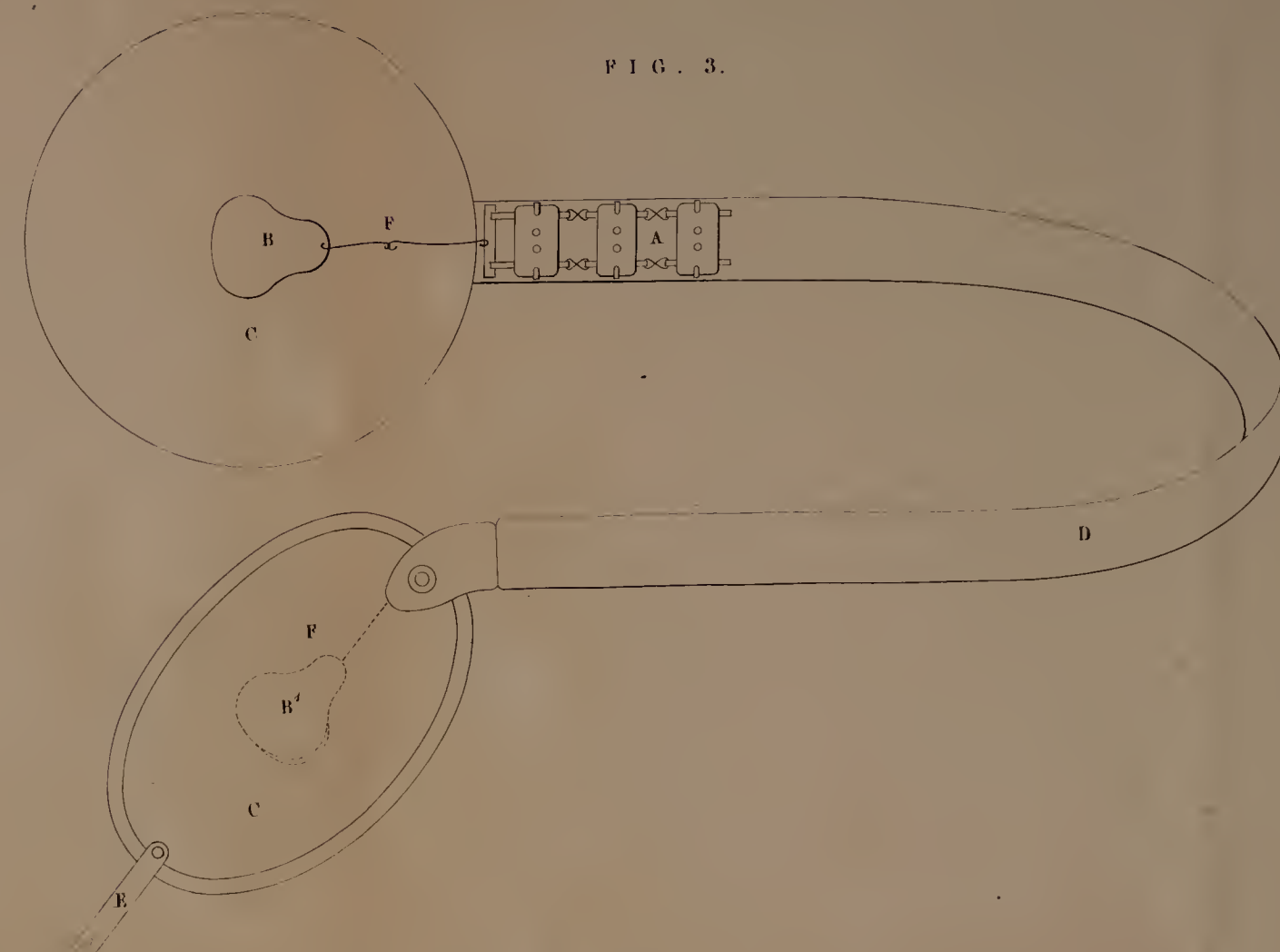


FIG. 4.

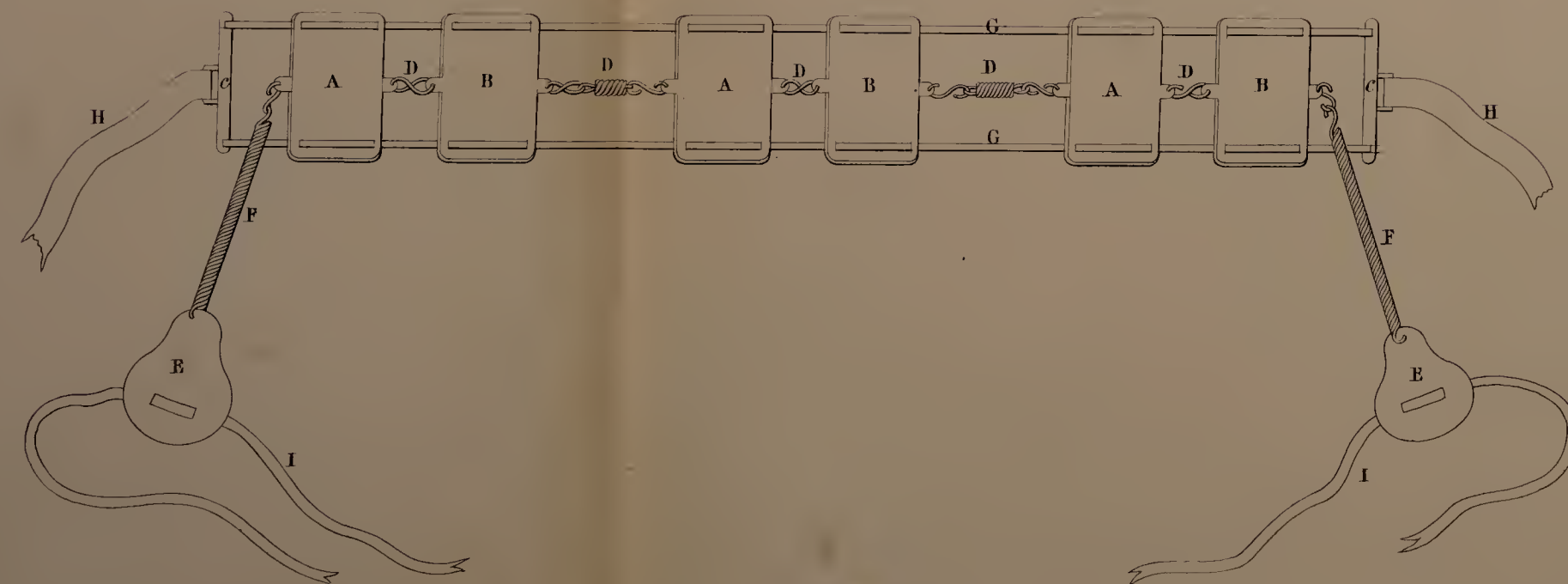


FIG. 5.

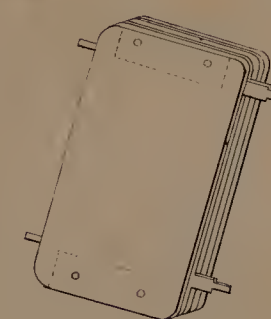


FIG. 6.

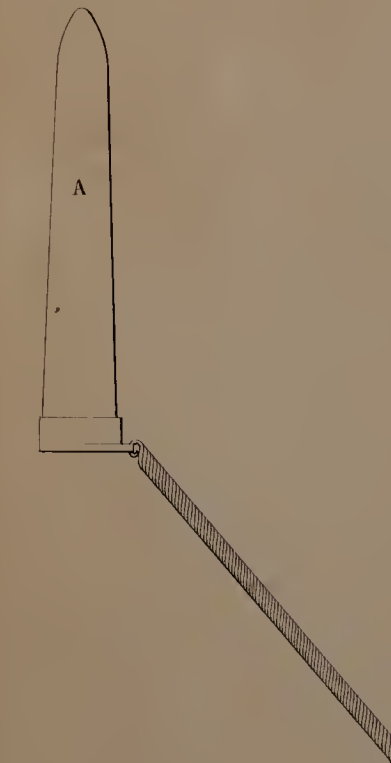


FIG. 7.

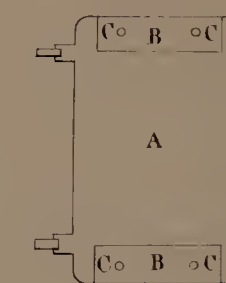
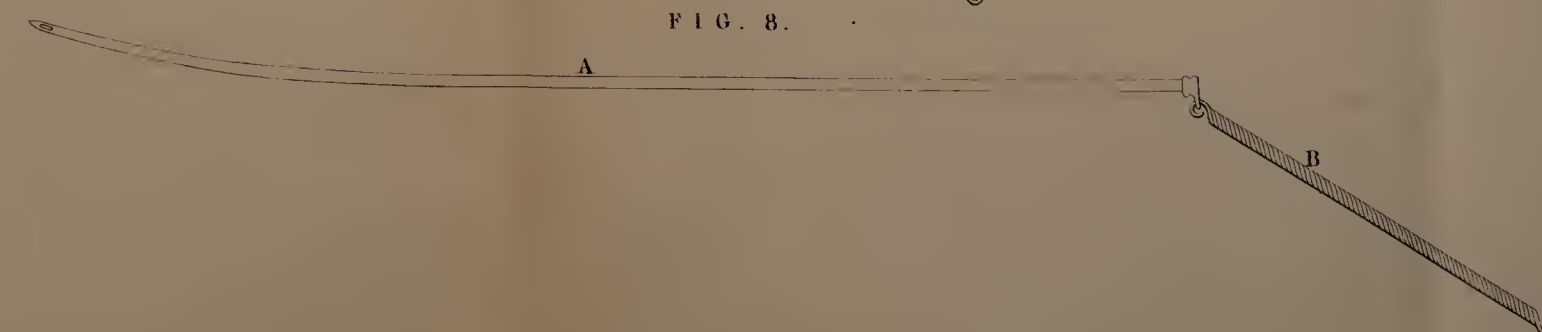


FIG. 8.



The Piled Drawing is partly Colored.

